

REMARKS

Claims 1-8 and 10-29 are pending in this application. In the Office Action mailed May 18, 2004, the Examiner rejected claims 1-8 and 10-21 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,327,626 ("Schroeder") in view of U.S. Patent No. 5,809,254 ("Matsuzono"). Additionally, the Examiner rejected claims 22-29 under 35 U.S.C. 102(b) as being anticipated by Matsuzono.

I. Response to §102(b) Rejection of Claims 22-29

The Examiner rejected claims 22-29 under 35 U.S.C. 102(b) as being anticipated by Matsuzono. In Matsuzono, a host computer includes a segment table for storing respective maximum segment sizes corresponding to various destination network addresses (e.g., other host computers). (abstract). When the host computer in Matsuzono decides to send data, it sequentially searches the segment table to find the entry corresponding to the destination address of the data to be sent. (abstract, col. 8, lines 36-39). The host computer then "selects the maximum segment size corresponding to the destination address read from the segment table 210, and then sets [sic] this selected maximum size to the connection end point 230." The connection end point 230 is an element inside the host computer 200 involved in the transmission of data from the host computer 200 to other host computers. When the host computer 200 subsequently transmits data, the segment size of the transmitted data is limited to the maximum segment size previously retrieved from the segment table.

Matsuzono fails to teach or suggest all elements of Applicants' claim 22. Specifically, Matsuzono fails to teach or suggest "intercepting a first announcement of a first connection between said data source and said data receiver," as is expressly claimed by Applicants. In Matsuzono, two host computers communicate with each other. As previously described, one of the host computers can access a segment table stored by that host computer in order to determine a maximum

segment size for transmitting data. Thus, there is no third network element in Matsuzono to "intercept" any announcement of a connection between the host computers. It is one of the host computers itself in Matsuzono that detects data to be transmitted and determines a maximum segment size. In contrast, one embodiment described in Applicants' specification uses a Smart Traffic Engineer ("STE") as a network element apart from the data source and data receiver to intercept a message transported between the data source and the data receiver; however, other embodiments are possible as well.

Additionally, Matsuzono fails to teach or suggest "predicting a determined maximum segment size of said first connection, wherein said determined maximum segment size is placed in a signal" and "sending said signal with a no-fragment option set to said data source and said data receiver," as is claimed by Applicants. First, and as previously described, one of the host computers in Matsuzono accesses a segment table, which is stored internally in the host computer, in order to retrieve a maximum segment size. Once the maximum segment size is retrieved, it is stored internally at another location in the host computer and subsequently used by the host computer in sending data. The maximum segment size is not transmitted to another host computer - it is retained internally and used internally. Thus, Matsuzono does not teach or suggest sending a maximum segment size to both a data source and a data receiver, as is claimed by Applicants.

Second, as Matsuzono does not teach or suggest sending the maximum segment size to another host computer, Matsuzono therefore also does not teach or suggest sending the maximum segment size in a signal with a no-fragment option set. The passages cited by the Examiner simply do not refer to any communication to both the host computers regarding setting the maximum segment size. Accordingly, there is no signal sent to both host computers, let alone with a no-fragment option set. Thus, Matsuzono does not teach or suggest all elements of Applicants' independent claim 22. Therefore, independent claim 22 and dependent claims 23-24 are allowable.

Independent claim 25 has been amended to clarify that the network device is separate from

the data source and the data receiver. For the reasons previously discussed with respect to claim 22, independent claim 25 is allowable. Accordingly, dependent claims 26-29 are also allowable.

II. Response to §103(a) Rejection of Claims 1-8 and 10-21

The Examiner rejected claims 1-8 and 10-21 under 35 U.S.C. 103(a) as being unpatentable over Schroeder in view of Matsuzono. Claim 1 is directed toward a method for changing a maximum segment size for a connection between a data source and a data receiver. It includes the elements of "receiving an announcement of a first connection between said data source and said receiver" and "changing said maximum segment size in said announcement of said first connection to a determined maximum segment size, wherein the determined maximum segment size reduces message fragmentation."

As described in the Office Action Response filed September 22, 2003, Schroeder relates to spoofing a local TCP protocol tack into thinking a remote station has an MSS value different from its actual values. (See, e.g., col. 2, lines 33-37). In particular, Schroeder recites that "the mechanism described herein allows a host using the TCP transport protocol to choose the larger of two unequal MSS values received during MSS negotiation when establishing a connection between two stations...instead of being the smaller of the two." (Col. 2, lines 53-59). Schroeder forces the use of larger MSSs than can be handled by the host and thus enhances message fragmentation.

The Examiner recognizes that Schroeder does not teach or suggest adjusting the maximum segment size in order to reduce fragmentation and turns to Matsuzono to find this element. As previously discussed, Schroeder teaches a method that enhances message fragmentation, and therefore directly teaches away from any modification that would reduce message fragmentation. In fact, any such modification would change the principle of operation of Schroeder. Accordingly, there is no motivation to combine Schroeder with Matsuzono, and therefore Applicants respectfully submit that the Examiner has failed to make a prima facie case of obviousness. Therefore, independent

claim 1 and dependent claims 2-8 are allowable.


Claim 11 is directed toward a method of reducing message fragmentation for a connection between a data source and a data receiver. Both Schroeder and Matsuzono again fail to teach or suggest all elements of this claim. In Schroeder, a mechanism referred to as MSS spoofing intercepts and modifies the MSS value specified in a TCP SYN packet, and this mechanism allows a host using the TCP transport protocol to choose the larger of two unequal MSS values received during MSS negotiation when establishing a connection between two stations. (abstract). Thus, Schroeder operates during establishment of a session between two stations by modifying values in packets exchanged between hosts during establishment of the session. Contrary to the Examiner's assertions, Schroeder does not teach or suggest resetting an already established session and then initiating a new session. In fact, since Schroeder operates during the process of establishing a session, there would not even be an established session for the mechanism in Schroeder to terminate. As Matsuzono does not make up for the deficiencies of Schroeder, both references do not teach or suggest all elements of claim 11. Therefore, independent claim 11 and dependent claims 12-21 are allowable.

III. Conclusion

Reconsideration of this application is respectfully requested and a favorable determination is earnestly solicited. Further, Applicant submits that the pending claims are in condition for allowance, and issuance of a Notice of Allowance is respectfully requested. If any questions arise, Applicants' attorney, Brian Harris, may be reached at his direct dial number of (312) 913-3303.

Respectfully submitted,

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